

## **ABSTRACT**

### **MATERNAL LIPID PROFILE DURING PREGNANCY AND ITS ASSOCIATION WITH PREGNANCY COMPLICATIONS**

#### **Abstract**

#### **Introduction:**

Pregnancy is marked by physical and metabolic adaptations. There will be an altered lipid metabolism and lipid profile status at the time of pregnancy, when compared to the pre- pregnant status. During this period, there is adipose tissue expansion and the hepatic lipid synthesis increases. The pregnant woman will develop peripheral insulin resistance and alteration of hormones, those directly involved in the lipid metabolism such as leptin and insulin are higher than the non pregnant state. Consequently , all serum lipid fractions progressively increase, some of them up to two fold. These changes are essential for adequate fetal development and growth.

#### **Aim:**

To estimate the lipid levels in pregnancy and determine whether it is associated with pregnancy complications.

**Objective of the study:**

PRIMARY OBJECTIVE– To study the lipid profile in pregnancy in the third trimester of pregnancy.

SECONDARY OBJECTIVE– To correlate the same with the pregnancy complications and neonatal outcome.

**Materials and methods:**

This prospective study was conducted in PSG IMS@R, Coimbatore, Tamil Nadu by enrolling antenatal cases from 2017-2018. The study was conducted on 200 pregnant local women after taking an informed consent from patients to get enrolled in the study. Statistical analyses were performed using statistical package for social sciences (SPSS). All reported p values are two tailed and confidence intervals were calculated at the 95% level.

**Results:**

In 200 study population, 124 patients had elevated triglyceride values, 92 patients had elevated total cholesterol values, 138 patients had elevated low density lipoproteins, 183 patients had elevated high density lipoprotein. In my study the mean values of total cholesterol-209mg/dl, triglyceride-210mg/dl, HDL-56.8mg/dl, LDL-140mg/dl. In this study out of 200 pregnant women 35 patients had developed GDM, 21 patients had preterm delivery, Only 4 patients had Preeclampsia. 124 patients had elevated triglyceride in which 30 patients

had developed GDM, 18 patients had preterm delivery, and found to have statistically significant result. Total cholesterol, LDL, HDL level and the pregnancy outcomes were analysed and showed insignificant statistical result.

### **Conclusion:**

In conclusion out of 200 pregnant women, serum triglyceride is elevated in 124 low risk pregnant women, in which 30 patients had developed Gestational diabetes mellitus and 18 patients had developed pre term delivery. Hence the serum triglyceride has been found to be useful simple marker for Gestational diabetes mellitus and preterm delivery. Postpartum follow up is necessary in patients with dyslipidemia to prevent future complications like atherosclerosis and heart disease. Hence certain life style modifications is required in women of reproductive age group to lower the lipid levels as it can prevent the hypertensive complications in pregnancy, GDM and Preterm delivery.